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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
JOHNS, ANDREW W	

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/657,138	PERLMUTTER ET AL.	
	Examiner	Art Unit	
	Andrew W. Johns	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49,51-59 and 63-65* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *42* is/are allowed.

6)☒ Claim(s) *1-3,12-16,19,24-41,43,48,49,51-59 and 63-65* is/are rejected.

7)☒ Claim(s) *4-11,17,18,20-23 and 44-47* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/8/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 24, 28, 30-31 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ishizawa et al. (US 5,781,666 A).

With respect to claim 1, Ishizawa et al. teaches a method of reducing differential resolution (see the Abstract, lines 4-10), the method comprising: selecting a first image containing first information about a scene (i.e., color image information; column 6, lines 37-40); selecting a second image containing second information about the scene (i.e., binary-coded image information; column 6, lines 34-37), wherein a portion of the first image and a portion of the second image have differential resolution (the color image has a resolution of 100 dpi; column 6, line 40; while the binary-coded image has a resolution of 400 dpi; column 6, line 37; so that the images have a differential resolution); determining a location at which to modify a property of the first image to reduce the differential resolution (column 11, lines 30-32; a 4x4 array of the binary-coded image which corresponds to the center pixel of a 3x3 array of pixels from the color image; column 11, lines 32-34); and reducing the differential resolution by

modifying the property at the determined location in the portion of the first image (column 11, lines 44-53; colors are assigned to the pixels of the binary-coded image in accordance with the colors of the color image, to produce a high resolution color image without any differential resolution; see Figure 11(A), for example).

Ishizawa et al. further teaches that the images are digital images (i.e., one bit per pixel for the binary-coded image; column 6, line 36; and 24 bits per pixel for the color image; column 6, line 39), the location comprising a pixel (column 11, lines 30-34), and the property comprises an intensity value or a function of the intensity value of the pixel (i.e., the color value of the pixel; column 11, line 66 through column 12, line 6), as further required by claim 2; that the information used in modifying the property at the location includes the resolution information from the second image (i.e., the enhanced image has the resolution of the binary-coded image), as required by claim 3; that the first image comprises an image that has been modified with information obtained from the second image (as illustrated in Figure 11(A), the color image is modified using the resolution information from the binary-coded image), as stipulated by claim 24; that the location is determined automatically (column 11, lines 30-34 and 48-53), as is the modification of the property (column 11, lines 44-53), as variously set forth in claims 28 and 30; and the determination of the location being based on information obtained at least in part from the portion of the second image (column 11, lines 32-34; i.e., the center pixel in a 3x3 array of the color image that corresponds to the array from the binary-coded image), as required by claim 31.

With respect to claim 43, Ishizawa et al. teaches an apparatus (shown generally in Figure 1) comprising a computer readable medium having instructions stored thereon (i.e., programs; column 6, lines 11-12) that when executed by a machine result in at least the following: selecting

a first image containing first information about a scene (i.e., color image information; column 6, lines 37-40); selecting a second image containing second information about the scene (i.e., binary-coded image information; column 6, lines 34-37), wherein a portion of the first image and a portion of the second image have differential resolution (the color image has a resolution of 100 dpi; column 6, line 40; while the binary-coded image has a resolution of 400 dpi; column 6, line 37; so that the images have a differential resolution); determining a location at which to modify a property of the first image to reduce the differential resolution (column 11, lines 30-32; a 4x4 array of the binary-coded image which corresponds to the center pixel of a 3x3 array of pixels from the color image; column 11, lines 32-34); and reducing the differential resolution by modifying the property at the determined location in the portion of the first image (column 11, lines 44-53; colors are assigned to the pixels of the binary-coded image in accordance with the colors of the color image, to produce a high resolution color image without any differential resolution; see Figure 11(A), for example).

Finally, Ishizawa et al. further teaches that the apparatus include a processing device coupled to the computer readable medium for executing the stored instructions (i.e., CPU; column 6, lines 10-11), as additionally stipulated by claim 49.

3. Claims 51-55, 59 and 63-65 are rejected under 35 U.S.C. § 102(e) as being anticipated by Wu (US 6,477,270 B1).

With respect to claims 51-55 and 63-65, Wu teaches an apparatus having stored thereon a resolution-enhanced image (column 4, lines 28-32; the new image 75 is created and saved in a computer). Wu further teaches that the apparatus comprises a computer-readable medium (i.e. a computer file; column 4, lines 30-31), as further required by claim 59. While Wu fails to describe each of the limitations set forth in claims 51-55 and 63-65 describing the processing

used to create the resolution-enhanced image, these limitations fail to patentably distinguish the claimed invention from the prior art. The exact nature of the stored image does not depend upon the apparatus storing it and the nature of the apparatus is in no way dependent upon the details of the image stored therein. The stored image is analogous to printed matter on a substrate. "Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability." *In re Gulack*, 703 F.2d 1381 (Fed. Cir. 1983). Because there is no necessary functional relationship between the content or nature of the image data and the apparatus for storing it, the exact details of the image data or its generation do not distinguish the apparatus claimed from the apparatus set forth in Wu. Therefore, Wu anticipates the claimed invention.

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 56-58 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wu as applied to claims 51-55, 59 and 63-65 above, and further in view of Miyabata et al. (US 5,418,574 A).

While Wu meets the basic limitations of claims 51-55, 59 and 63-65, as pointed out more fully above, Wu fails to specifically teach that the apparatus comprise a reel, a video or an optical disc, as variously stipulated by claims 56-58.

Miyabata et al. teaches an apparatus that stores an enhanced image (i.e., compensating for color bleeding; column 1, lines 9-11), the apparatus comprising video (column 1, lines 11-12) or an optical disc (column 1, line 15). Miyata et al. also inherently teaches that the apparatus can comprise a reel, as the video cassette recorders described at column 1, lines 11-12 include reels to store the tape having the images recorded thereon. Because such video and optical discs are exceedingly common storage devices for image data, it would have been obvious to use such devices to store the image data of Wu, because such devices are readily available and easily useable. Therefore the claimed invention would have been obvious to one of ordinary skill in the art at the time of the invention.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 C.F.R. § 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R. § 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 C.F.R. § 3.73(b).

7. Claims 1-2, 12-16, 19, 24-29, 32-41, 43, and 48-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17, 20-26, 35-36, and 38 of copending Application No. 10/657,243. Although the conflicting claims are not identical, they are not patentably distinct from each other because each of the limitations of the instant claims are fully defined by the claims of the co-pending

application. Specifically, with respect to claim 1 of the instant application, claim 1 of the '243 application defines a method of reducing differential resolution (line 1), the method comprising selecting a first image containing first information about a scene (line 2); selecting a second image containing second information about the scene, wherein a portion of the first image and a portion of the second image have differential resolution (lines 3-4); determining a location at which to modify a property of the first image (line 5), the location being in a portion of the first image (line 6); and reducing the differential resolution by modifying the property at the location in the first image using information from second image (lines 8-9).

Similarly, with respect to claim 43 of the instant application, claim 35 of the '243 application defines an apparatus comprising a computer readable medium having instructions stored thereon that when executed by a machine result in at least the following (lines 1-2): selecting a first image containing first information about a scene (line 3); selecting a second image containing second information about the scene, wherein a portion of the first image and a portion of the second image have differential resolution (lines 4-5); determining a location at which to modify a property of the first image (line 6), the location being in a portion of the first image (line 7); and reducing the differential resolution by modifying the property at the location in the first image using information from the second image (line 9).

While these claims of the '243 application includes additional limitations, the use of the transitional term "comprising" in the instant claims fails to preclude the possibility of these additional limitations so that the instant claims are not patentably distinct from the claims in the co-pending case.

Furthermore, each of dependent claims 2, 12-16, 19, 24-29, 32-41 and 48-49 are word for word identical to various of dependent claims 2-17, 20-26, 26 and 38 of the '243 application, and therefore also fail to define a patentably distinct invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

8. Claim 42 is allowed.

9. Claims 4-11, 17-18, 20-23, and 44-47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Johns whose telephone number is (703) 305-4788. The examiner in normally available Monday through Friday, at least during the hours of 9:00 am to 3:00 pm Eastern Time. The examiner may also be contacted by e-mail using the address: andrew.johns@uspto.gov. (Applicant is reminded of the Office policy regarding e-mail communications. See M.P.E.P. § 502.03)

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number for this art unit is (703) 872-9306. In order to ensure prompt delivery to the examiner, all unofficial communications should be clearly labeled as "Draft" or "Unofficial."

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center Receptionist whose telephone number is (703) 305-4700.

A. Johns
8 November 2004

ANDREW W. JOHNS
PRIMARY EXAMINER